HL109 Series Thermostat User Manual

HL109 Series thermostats are available for individual room temperature control in residential, industrial and business premises. Suitable for 2-pipe or 4-pipe Fan Coil configuration.

HL109 Series thermostats adopt electronic control technology, and the operations are easy and convenient. User can turn the temperature adjusting knob to the desired temperature. User can also choose the COOL or HEAT working mode through the switch of HEAT–OFF-COOL, and the fan speed (Hi, Med or Low) through the switch of fan speed HIGH-MED-LOW.

MODEL DENOMINATIONS

HL109 □

- DA/DA2: Control Motorized Valve (DA: Control 2-wire N.C. FCU valve; DA2: Control 3-wire FCU valve) and 3-speed fan; When the temperature reaches the set-point, it will close the Motorized Valve with the fan still running.
- DB/DB2: Control Motorized Valve (DB: Control 2-wire N.C. FCU valve; DB2: Control 3-wire FCU valve) and 3-speed fan; When the temperature reaches the set-point, it will close the Motorized Valve and Fan both.
- FCV2: Control 4 pipe fan coil units, Control two Motorized Valves and 3-speed fan, when the temperature reaches the set-point, it will close the Motorized Valves with the fan still running.

SPECIFICATIONS

- Sensing element: NTC
- Switching Differential: Approx ±1.5□
- Temperature Range: 10～30□ adjustable
- Operating Temperature: 0～45□
- Operating Humidity: 5～90%RH
- Storage Temperature: −10～60□
- Operating Voltage: AC 220V ±10%, 50/60Hz
- Switch current rating: Resistive: 1 A, Inductive: 0.5 A
- Housing: PC＋ABS Flame Retardant
- Wiring Diameter: 0.5～2.5 mm^2
- Dimension: 86 × 86 × 24 mm (W × H × D)
- Hole pitch: 60 mm (Standard)

OPERATION INSTRUCTION

There are temperatures adjusting knob and graduation mark on the front panel. There are also the switch of fan speed HIGH-MED-LOW and the switch of HEAT-OFF-COOL on the front panel. The operation steps as follows:

☞ Turn On/Turn Off: Push the switch to HEAT when heating, or push the switch to COOL when cooling. When push the switch to the position of OFF, the thermostat will be turned off.

☞ Temperature Setting: Turn the temperature adjusting knob to the desired temperature.

☞ Fan Speed Selection: Push the fan speed selecting switch to one of HIGH-MED-LOW.

☞ LED indicates operation state: In RED shows the power is on; In ORANGE shows under heating or cooling.

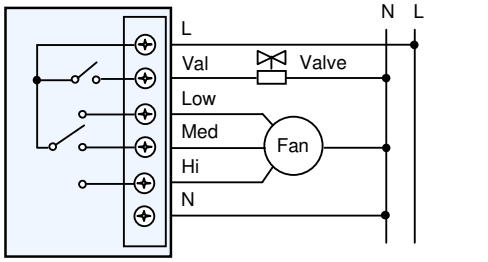
☞ Control Motorized Valve under 2-pipe configuration (HL109DA/DB/DA2/DB2): If the difference between room

temperature and set-point exceed 1℃, FCU Valve will be open; If room temperature and set-point are equal, HL109DA/DA2 will close the FCU valve with the fan still running; HL109DB/DB2 will close the FCU valve and Fan both.

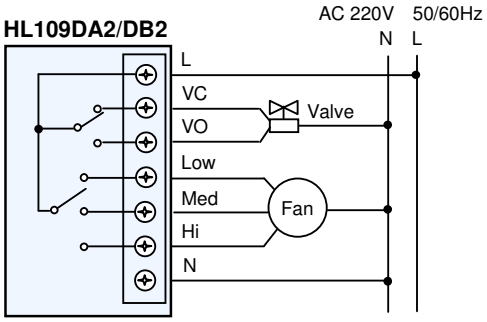
☞ Control FCU valve under 4-pipe configuration (HL109FCV2): In cooling, when the room-temperature is higher than set-point, the cooling valve will be opened. Otherwise it will be closed. Heating valve is always closed. In heating, When the room temperature is lower than set-point, the heating valve will be opened. Otherwise it will be closed. Cooling valve is always closed.

WIRING DIAGRAMS

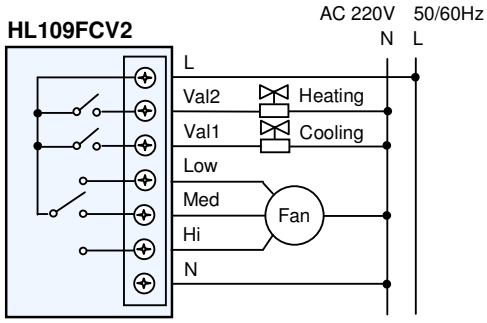
HL109DA/DB



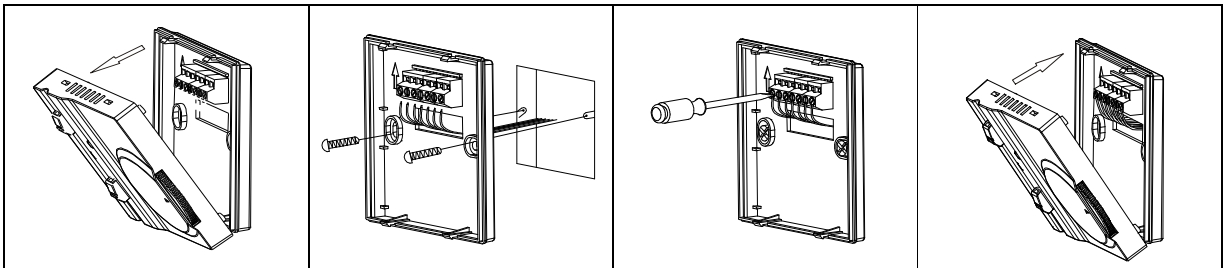
HL109DA2/DB2



HL109FCV2



MOUNTING



1. Open Thermostats	2. Install Back Base	3. Wire Connection	4. Close Front Case

Note: Be sure to connect all the wires as per the wiring diagrams and keep it away from water, mud and other material so as to prevent the unit being spoiled!